



Foreword

The Office of Climate Observation is pleased to present the Fiscal-Year 2006 *Annual Report on the State of the Ocean and Ocean Observing System for Climate*. While this effort serves primarily as an internal management tool, we hope that the *Annual Report* may continue to develop into an authoritative public record of the progress of the global observing system and its effectiveness in documenting the ocean's contribution to our Earth's changing climate.

Many people have contributed to this report either directly or indirectly, including scientists, engineers, technicians, researchers, teachers, and students at laboratories, universities, and oceanographic and atmospheric centers and institutions. The officers, crews, and volunteers on board the vessels where the fieldwork occurred played a major role as well. This document is a collaborative effort produced by a dedicated team of individuals focused on learning more about the influences of our oceans on climate.

The plan for implementing the global ocean observing system has been developed and agreed upon internationally, and we have taken great strides as a global community to fulfill the long-term goals that will achieve this monumental effort. We are proud to be part of the NOAA team that has worked closely with partners from more than 60 nations to bring the global observing system this far.

In FY 2006 incremental advances were made across the observing networks allowing the overall observing system to grow from 55% to 56% complete; the Global Drifting Buoy array was maintained at its design goal of 1250 buoys in sustained service; the Tropical Moored Buoy network was expanded in the Atlantic Ocean; the Argo array continued its rapid progress toward global coverage, passing the milestone of 2500 floats in service; two new carbon dioxide monitoring systems were added to Ocean Reference Stations; several new observational projects were started; and fourteen GCOS tide gauge stations were upgraded to real time capabilities, thus adding these climate stations to the international tsunami warning system.

Sustained ocean observations form the basis for establishing the trends and variability in essential climate variables, which are reported each year in the annual *State of the Climate* special edition of the Bulletin of the American Meteorological Society. In FY 2006 the Global Oceans chapter of the BAMS report, edited by the Office of Climate Observation and written largely by OCO scientists, contained seven sections that now replace the "State of the Ocean" chapter previously found in the OCO annual report. We believe that by integrating the presentation of oceanic and atmospheric essential climate variables, we better bring to life the full value of the observations.

The Office of Climate Observation is convinced that the accomplishments outlined within this report will help the global community understand more clearly and quantitatively the role of the oceans in our Earth's ever-changing climate system. We look forward to the future as we unravel the mystery of our oceans together. It is with great pleasure that we present this work.

Mike Johnson
Director, Office of Climate Observation

Editor: Joel M. Levy
Program Manager, Office of Climate Observation